

B1
transceiver (as shown in Figure 1) typically incorporating circuit functions 3,4,5,6,7 shown in FIG. 48a. Circuit functions are often classified according to the types of signals present in performing a given function. A transceiver typically processes and generates digital, analog and radio frequency signals. As shown in Figure 48a, radiation and conduction mechanisms 2 tend to create a cross-talk coupling mechanism that allows unwanted signals to be injected at various undesired locations on the integrated circuit 1. It is desirable to utilize a method of integrated circuit construction that tends to eliminate cross-talk and the coupling paths associated with it.

Page 79, line 34, please change the paragraph as follows:

B2
FIG. 48b is a block diagram of a fully balanced circuit utilizing common mode averaging. A circuit incorporating noise rejection mechanisms as shown includes two identical logic gates connected to the power supply V_{DD} and ground through two resistors R1 and R2. In this circuit configuration, a conventionally constructed differential circuit is coupled between a power supply V_{DD} and ground.

Page 82, line 11, please change the paragraph as follows:

B3
Returning to Figures 48c and 48d of a fully balanced architecture having common mode inductive load, the use of these circuits in minimizing the sensitivity of analog and RF circuits to spurious noise is described. Circuit inputs and outputs are typically single-ended. Conventionally constructed fully balanced circuits are used in the embodiment of a transceiver shown to avoid the pickup of spurious noise signals. In the embodiment of the invention, having single-ended external connections available to an input, output or both, a conventional single-ended to differential circuit is added at each single-ended to differential interface.

Page 82, line 25, please change the paragraph as follows:

B4 Figure 48e is a block diagram of a fully balanced architecture having an AC coupled tail current source coupled to ground. Transistor M1 forms a tail current source having its gate AC coupled to ground by capacitor C2. AC coupling the gate to ground eliminates common mode low impedance paths from the ground to the output. Noise is picked up typically through the ground as the ground reference potential varies from noise spikes. Any change in the potential of the ground is transferred to the gate of current source M1. Coupling the gate and source of M1 causes their potential to track each other, tending to prevent the transmission of noise through common mode noise pickup from the ground. Common mode signal rejection is important since common mode signals injected into the differential circuit tend to mix with other differential signals in non-linear devices typically present in the differential circuit. The mixing generates end-band differential spurious signals that are undesirable.

Page 83, line 7, please change the paragraph as follows:

B5 The fully balanced differential circuit having an AC coupled tail current source includes a resistor R4 coupled between a voltage source VDD and differential circuit power supply terminal +V. A ground terminal GND of the differential circuit is coupled to the drain of a field effect (FET) transistor M1. The source of M1 is coupled to ground at node 8. The gate of M1 is coupled to a first terminal of resistor R3 and a first terminal of capacitor C2. A second terminal of capacitor C2 is coupled to ground node 8. A second terminal of resistor R3 is coupled to a conventionally constructed bias generator circuit.

Page 83, line 19, please change the paragraph as follows:

B6 A fully balanced differential circuit is conventionally constructed as known by those skilled in the art to achieve a desired